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Remarks

This Amendment and Response is submitted in reply to the Office Action mailed August 10, 2005. Claims 1-45 were rejected. Reexamination and reconsideration is respectfully requested.

Various informalities in the specification and claims have been corrected.

Claims 1, 2, 5, 7-10, 13, 15-19, 23, 24, 26, 28, 31-40 and 42 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,176,162 ("Ludwig"). Ludwig discloses a screwdriver with an adjustable torque-dependent release clutch combined with an entrainment clutch. It is asserted on the top of page 4 of the Office Action that Ludwig includes an "interface member comprising an elongated surface generally oriented along a longitudinal axis of the inner handle (small balls 39, Fig. 1)." Applicants respectfully disagree.

Assuming that the small balls 39 of Ludwig perform a torque limiting function, they do not possess an elongated surface generally oriented along a longitudinal axis of the inner handle. The surfaces of small balls 39 are not elongated and do not have an orientation. Therefore, the small balls 39 can not be oriented along a longitudinal axis of the inner handle.

In geometric terms, the intersection of a sphere and a flat surface is a single point. The small balls 39 of Ludwig provide minimal surface area of engagement for controlling torque transmission.

As illustrated in Figure 15 of the present invention, the interface members 40 include elongated surfaces 42 that transmit torque from the outer handle 46 to the inner handle 20, and hence, to the tool 80.

By increasing the surface area of the elongated surface 42, higher torque can be transmitted. Alternatively, lower cost materials, such as plastics, can be used to construct the interface elements 40 and handles 20, 46 of the present invention. The elongated surface 42 preferably has a length "L" of at least 0.5 inches, more preferably 1.0 inch, and most preferably at least 1.25 inches. The width "W" is typically less than the length "L". (Specification, page 7, lines 16-22).

The claimed interface members with longitudinally oriented elongated surfaces result in a torque limiting tool with a reduced number of components, resulting in

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less complexity and lower cost. The elongated interface members distribute the torque across larger surface areas than a conventional torque wrench, resulting in a reduced need for wear resistant and higher cost materials, such as metals. Low cost materials, such as plastics, can be substituted.

Independent claims 1, 35, and 36 all recited at least one interface member comprising an elongated surface generally oriented along a longitudinal axis of the inner handle. Independent claim 37 recites coupling the longitudinal biasing force to one or more interface members to bias a longitudinally oriented elongated surface on the interface members radially outward. Ludwig does not teach or suggest the claimed structure. Therefore, claims 1, 35, 36, and 37, and the claims that depend thereon, are not anticipated by the cited reference.

Claims 1-10, 13-24, 26-29, 31-33, 35, and 37-44 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,239,875 ("Stasiek") in view of Ludwig. As indicated in column 9, lines 10-14 of Stasiek, "rotation of the tubular body 13 causes the cylinders 49 of the drive member 45 to engage the torque transmission balls 36 and turn the drive member 30 along with the tubular body 13." The curved surface of the cylinders 49 engage with the spherical surfaces of the balls 36. In geometric terms, the intersection of a cylinder and a sphere is a single point.

As discussed in connection with Ludwig, the balls 36 do not have an orientation. The side surfaces of the cylinders 49 of Stasiek that engage with the balls 36 are oriented radially outward. As indicated on page 9 of the Office Action, Stasiek lacks the radially oriented slot, the longitudinal biasing force to bias the interface members radially outward, and the outer handles having an inner surface limiting radial displacement of the interface member.

Therefore, Stasiek does not supply the element missing from Ludwig and no prima facie case of obviousness is set forth. For the reasons discussed above, Applicants submit that claims 1, 35, 36, and 37, and the claims that depend thereon, are patentable over the cited references.

Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stasiek and Ludwig in view of U.S. patent No. 6,308,598 ("O'Neil"). In light of the

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allowability of claim 1 discussed above, Applicants submit that claims 11 and 12 distinguish over the cited references.

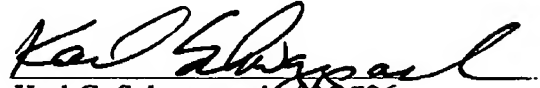
Claims 25 and 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stasiek and Ludwig in view of U.S. patent No. 6,487,943 ("Jansson"). In light of the allowability of claim 1 and 37 discussed above, Applicants submit that claims 25 and 45 distinguish over the cited references.

No fee is believed to be necessary. Should any fee be required, the Commissioner is authorized to charge our Deposit Account No. 06-0029, and in such an event, is requested to notify us of the same.

Respectfully Submitted,

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